REMARKS

Claims 1-128 are pending, with claims 1, 7, 13, 19, 25, 30, 42, 54, 66, 78, 87, 96, 105, 114, and 121 being independent. The abstract has been amended. No new matter is introduced.

Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,150,042 to Tamano (Tamano). Claims 25-128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamano in view of U.S. Patent No. 6,097,147 to Baldo et al. (Baldo).

Regarding preliminary matters, and as previously noted in Applicant's response of January 22, 2004, Applicant notes that the Form PTO-1449 filed with the IDS of June 19, 2002 was not initialed and returned with the present Office Action. Applicant respectfully requests that an initialed version of the Form PTO-1449 be included in the Examiner's next official communication. For the Examiner's convenience, a copy of the Form PTO-1449 is included with this response.

Applicant thanks the Examiner for withdrawing the rejections issued in the Office Action of September 22, 2003. Regarding the rejection of claims 1-24 under 35 U.S.C. 102(e) as being anticipated by Tamano, Applicant respectfully submits that Tamano does not disclose or properly suggest all of the elements recited in at least independent claims 1, 7, 13, and 19, and therefore does not anticipate these claims.

For example, independent claim 1 recites:

> A luminescent device:
> comprising an organic luminescent element comprising:
> an anode;
> a cathode; and
> a hole transporting layer provided between the anode and the cathode, comprising a first compound and a second compound;
> wherein ***the first compound is smaller in ionization potential than the second compound***, and
> wherein ***the second compound is larger in hole mobility than the first compound***.

The Office Action maintains in paragraph 5 that Tamano discloses "an electroluminescent device ... (having) ... hole-transporting materials that can be used together

such as aromatic tertiary amines and copper phthalocyanine ... (as well as that a) ... light-emitting material and the dopant can be used in combination and can comprise a combination of metal complexes...the electron-transporting layer can have a combination of organic compounds such as triazole and oxadiazole derivatives...phosphor dopants are added to promote luminescence from a triplet state."

Even assuming the validity of these statements, Applicant respectfully submits that Tamano does not disclose or properly suggest the above-emphasized claim features. Specifically, Tamano does not disclose or properly suggest a hole transporting layer having a first compound and a second compound, where the "the first compound is smaller in ionization potential than the second compound, and ... the second compound is larger in hole mobility than the first compound."

In short, even if Tamano discloses hole-transporting materials that include various compounds that may be used together, Tamano does not disclose or suggest that these compounds have all of the properties recited in independent claim 1, and does not recognize the claimed relationship(s) between the recited properties of the claimed first and second compounds. That is, Tamano does not provide an explicit teaching or inherent disclosure that the hole-transporting materials of Tamano have the claimed properties. Nor does Tamano provide a proper suggestion that the cited compounds could be selected or modified to have the claimed properties.

Independent claims 7, 13, and 19 similarly include a recitation of a layer of an organic luminescent element having compounds having particularly-recited properties with respect to one another. For example, independent claim 7 recites an electron-transporting layer with a first compound larger in electron affinity, and a second compound larger in electron mobility. Independent claims 13 and 19 recite a luminescent layer with a first compound larger in hole mobility, and a second compound larger in electron mobility.

Accordingly, Applicant respectfully submits that Tamano does not disclose or suggest at least the above-recited elements of independent claims 1, 7, 13, and 19. Therefore, these claims,

along with their dependent claims 2-6, 8-12, 14-18, and 20-24 are believed to be in condition for allowance for at least these reasons.

Regarding the rejection of claims 25-128 under 35 U.S.C. 103(a) as being unpatentable over Tamano in view of Baldo, Applicant respectfully submits that, even in combination, the cited references do not disclose all of the features of at least independent claims 25, 30, 42, 54, 66, 78, 87, 96, 105, 114, and 121.

For example, independent claim 25 recites:

> A luminescent device:
> comprising an organic luminescent element comprising:
> an anode;
> a cathode;
> a luminescent layer between the anode and the cathode; and
> a blocking layer adjacent to the luminescent layer, being provided between the anode and the cathode;
> wherein the blocking layer contains a blocking material and a material contained in the luminescent layer, and
> ***wherein an energy difference between a highest occupied molecular orbit and a lowest unoccupied molecular orbit in the blocking material is larger than an energy difference between a highest occupied molecular orbit and a lowest unoccupied molecular orbit in a material contained in the luminescent layer.***

Applicant respectfully submits that neither Tamano (cited for the teachings summarized above) nor Baldo (cited for its alleged teaching of a blocking layer) discloses the claimed relationship between a blocking material and the material in the luminescent layer, as emphasized in the recitation of independent claim 25, above. As a result, even if taken together, the cited references do not properly suggest all of the elements of claim 25, and, therefore, a prima facie case of obviousness has not been established.

Further, independent claim 30 recites a mixed region between a hole transporting material and an electron transporting material, containing both the hole transporting material and the electron transporting material. Again, even if Tamano and Baldo are taken in combination, Applicant respectfully submits that at least this feature(s) is not disclosed by such a combination.

Further, independent claims 42, 54, 66, 78, 87, 96, 105, and 114 similarly recite such a mixed region, which is not disclosed or properly suggested by the proposed combination.

Accordingly, claims 25, 30, 42, 54, 66, 78, 87, 96, 105, and 114, along with their dependent claims 26-29, 31-41, 43-53, 55-65, 67-77, 79-86, 88-95, 97-104, 106-113, and 115-120 are believed to be in condition for allowance for at least these reasons.

Finally, independent claim 121 recites contiguous first, second, third, and fourth mixed regions disposed between an anode and a cathode, each having properties as recited in independent claim 121. Neither Tamano nor Baldo discloses or properly suggests such first, second, third, and fourth mixed regions, nor does the Office Action allege that the cited references disclose or properly suggest the claimed mixed regions having the recited properties.

Accordingly, independent claim 121, along with its dependent claims 122-128, is believed to be in condition for allowance for at least these reasons.

Based on the above, all of claims 1-128 are believed to be in condition for allowance, and such action is hereby requested in the Examiner's next official communication.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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APPENDIX A

Interfaces between layers in a light emitting element are eliminated by using a light emitting element with a mixed region including a hole transporting material and an electron transporting material. The light emitting element may further comprise a region with a dopant. By using this light emitting element, an organic luminescent element of low power consumption and long life is achieved, and the light emitting element can be used to manufacture a luminescent device and an electric appliance.